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Preliminary Program Effects on Girls' Enrollment and Classroom Learning Environments

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STRENGTHENING THE EDUCATION OF GIRLS IN INDIA

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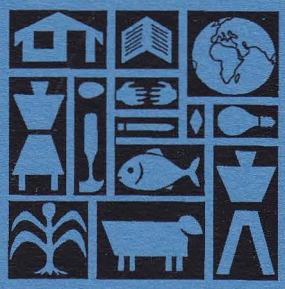
DELIVERABLE #7

PRELIMINARY PROGRAM EFFECTS ON GIRLS' ENROLLMENT AND CLASSROOM LEARNING ENVIRONMENTS



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Preliminary Program Effects on Girls' Enrollment and Classroom Learning Environments

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Strengthening the Education of Girls in India

Preliminary Program Effects on
Girls' Enrollment and Classroom Learning Environments
February, 1999

Highlights of Preliminary Results

The following preliminary results have been observed during the period of project intervention in the pilot block of Maharajganj.

- Cohort completion rates in four of the six sample schools are substantially higher for girls than boys in the 1994 Class V cohort.

- Class V enrollments for girls for the past three years ('96, '97, & '98) fluctuate without apparent pattern in the six sample schools.

- Gender ratios for girls and boys in Class V over the past three years also fluctuate without any apparent pattern. Average gender ratios for Class V range from 53% to 65% for the three years—higher than one would expect.

- The number of examples of girls and women used during lessons is high, especially in relation to the curriculum's reliance on male examples.

- Women teachers are twice as likely as men teachers to use examples of girls and women in lessons.

- Women are depicted in traditional roles more frequently than in non-traditional roles by both men and women teachers.

- Language constructions used by teachers are inclusive of both boys and girls.

- Teachers ask questions of girls more frequently than of boys, although general questioning patterns are inclusive.

- Girls are called to the blackboard or the front of the class to recite, lead a song or part of a lesson more frequently than boys.

- Girls are seated with equal access to the teacher.

Strengthening the Education of Girls in India

Preliminary Program Effects on Girls' Enrollments and Classroom Learning Environments

February, 1999

This deliverable responds to Sub-Activity 3, *Pilot Testing*, Tasks 15 and 16 which, in the copies of Attachments 1 and 2 sent to UMass by USAID on 12/12/95, are stipulated as:

Task 15: "Test module in selected schools" (Attachment 1, p. 3)[1]

> Task 15 is elaborated as "apply the new instructional methods in the 10 selected schools over a full academic year to test the validity and flexibility of the model to match the specific demands of respective schools" (p. 6).

Task 16: "Collect data and prepare and submit report of preliminary program effects" (Attachment 1, p. 3)

> Task 16 is elaborated as "conduct regular meetings with the Consultants and Resource Persons to create an appropriate climate for the program innovations and to provide information on retention and promotion of girls in school" (p. 7).

This deliverable responds to these two tasks by providing a detailed description of preliminary program effects in the sample schools in the pilot block for use by the Project Director, her staff, Resource Persons, the Advisory Committee, and Consultants to continue to make mid-course adjustments in project implementation, activities, and staffing. (See Deliverable 8, *Plan for Use of Findings for Decision-making and for Refinement of Program,* for details on these mid-course adjustments.)

This document describes the effects of the first two years of project implementation on girls' enrollment and on classroom environments in sample schools in the pilot block, Maharajganj. As per contract stipulations, the description focuses on the sample schools; analyses of block-wide enrollment patterns are presented in *Baseline Study, Part 3.*

The changing interest in girls' education in India generally and UP specifically, as well as a 14-month delay in GOI approval of the project, led to modifications in the Implementation Plan and, hence, the Monitoring and Evaluation Plan[2]. Early in the quest for GOI approval of the project, Indian officials expressed concern with the long pilot testing phase of the project's design. Based on these often-repeated concerns (which came from both the national and state levels), implementation was modified to speed up training in the pilot block and proceed to the second block sooner than the original implementation plan suggested. Given this modification, which was consistent with the interests and wishes of Indian officials, the sample schools in

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[1] All references to "the contract," "attachment 1," and "attachment 2" in this document (deliverable 7) refer to the copies received by UMass on 12/12/95 from Ben Vogler, contracts officer of USAID. In recent communications, the CTO's office appears to be referring to somewhat different documents. The University of Massachusetts' Office of Grants and Contracts Administration is seeking to resolve the discrepancies.

[2] See *Revised Implementation Plan*, submitted to USAID 3/98, and *Updated Monitoring and Evaluation Plan,* submitted to USAID 10/98.

Maharajganj have been limited to six, with the potential addition of three cluster central schools. The analyses reported here rely on three sources of data:

- official enrollment statistics gathered from the head teachers/principals in a project-developed and -administered survey for all schools in Maharajganj block;
- observations of teachers in classrooms in the sample schools; and
- anecdotal reports and observations by project staff made during field visits.

It should be noted that program effects on the agreed-upon major indicator of project performance—girls' enrollment in Class V—are unlikely to be visible until well into the project. The logic of the program theory (Weiss, 1998), discussed several times with Mission staff, suggests that effects will first be visible in specific classroom practices that encourage girls in their schooling. According to that logic, these practices will then translate into more enrollment, consistent attendance, and ultimate completion of Class V by girls. This logic is articulated in Attachment 2[3] to the Contract where it states that the project will fill a gap "by developing a teacher training module that identifies specific methods, behaviors, actions, and practices for increasing girls' school participation" (p. 2).

Teacher training in the block took place in three phases: 1) August 1997 when the teacher-researchers were trained to implement the participatory development phase of the project; Master Trainers are drawn, in part, from this core group; 2) March 1998; and 3) August through September 1998. (Due to a lengthy teachers'strike, modifications had to be made in the timing of the training.) In the first phase, **23** teacher-researchers were trained; in the second phase, **50** teachers were trained; and in the final phase, **98** teachers were trained, completing the training of all teachers in the pilot block. Trainers included Master Trainers Ms. Meher Kazmi and Ms. Chandrakanti Tewari Yadov (DIET lecturers); 12 Master Trainers drawn from the teacher-researcher group; Ms. Arti Srivastava (Project Field Officer at the time); the Project Director acting as lead trainer. Her office staff to provide logistical and documentation support.

Given that teacher training was completed in the pilot block in September 1998, it would be imprudent to expect any impact, due to project activities, on girls who entered school in July 1994 (those enrolled in Class V for the 1998-99 school year). Thus, this document describes enrollment patterns in Class V to date, showing trends on which subsequent analyses will elaborate.

Sample Schools

Table 1 provides a summary of salient characteristics of the sample schools. The table is followed by a brief narrative description of each school.

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[3] See footnote 1, p. 1. This reference is to UMass' copy of Attachment 2.

Table 1. The Sample Schools in Maharajganj Block.

School	Sept '98 enrollment	fall '98 # of teachers	interiority	# classrooms	p/t ratio
Chandapur	boys: 237 girls: 179 total: **416**	men: 3 women: 0	interior	4	139
Deparmau	boys: 65 girls: 59 total: **124**	men: 0 women: 2	interior	1	62
Halor	boys: 192 girls: 119 total: **311**	men: 0 women: 1	interior	2	311
Hardoi	boys: 116 girls: 142 total: **258**	men: 1 women: 2	interior	2	86
Kusrisagar	boys: 127 girls: 115 total: **242**	men: 2 women: 0	interior	2	121
Maharajganj	boys: 334 girls: 252 total: **586**	men: 3 women: 3	small town	6	98

Chandapur School: Chandapur is a large school, located far from a good road. In 1997, it had 6 teachers; by 1998, however, it had only 3 posted there. In 1998, enrollment was **416:** 237 boys and 179 girls. With these official enrollment figures and the reduced number of teachers, the pupil/teacher ratio was about 140 in the fall of 1998. Average daily attendance during the six days prior to a site visit showed boys attending at 90% and girls slightly lower, at 88%. The school has four classrooms, ten chairs, three tables, and three chalkboards. There is a latrine, but this was observed to be in unusable condition.

Deparmau School: The smallest sample school in the sample, Deparmau is also the most interior, far from a good road. In the fall 1998, it had two teachers posted there, both women (quite unusual in Maharajganj). Enrollment stood at **124** in October 1998: 65 boys and 59 girls. The pupil/teacher ratio is a little over 60 in this school. Average attendance for the week prior to observations showed girls attending at a higher rate than boys: 92 to 86% on the first site visit; 88 to 82% on the second site visit. There are two rooms, only one of which is a classroom (the other is for storage); a latrine that, according to the field researcher, is "not useful"; two tables, two chairs, and one stool, all donated by the villagers.

Halor School: Also an interior school, Halor had **311** students enrolled in fall 1998: 192 boys and 119 girls. At the beginning of the school year, there were five teachers posted to Halor, but in early September, all four men were transferred leaving one woman there. With enrollments at 311, this yields a very high pupil/teacher ratio of 311. Average daily attendance in the weeks

prior to the first site visits showed that boys and girls were attending in the same proportion: 93% for boys and 92% for girls. One month later, however, boys attendance had dropped dramatically to 75% while girls had dropped slightly to 90%. The school has two classrooms, two chairs, eight tables, four chalkboards, and a latrine but not a separate one for girls.

Hardoi School: Hardoi School is also a medium-sized school with enrollments at **258** in 1998. Atypical of the pattern for schools in India, girls out-numbered boys: 142 girls enrolled to 116 boys. It is also an interior school with limited access by public transport. In 1998, it had three teachers posted there, two men and one woman. This yielded a pupil/teacher ratio of 86. Average attendance in the week prior to the first site visit showed girls attending at higher rates than boys: 92% to 86%. One month later, boys' attendance had improved to 88% and girls' remained high at 92%. The school has two classrooms and one verandah which can be used for instruction, three tables, four chairs, and four chalkboards. There is no latrine in this school.

Kusrisagar School: Kusrisagar is a medium-sized interior school with enrollment of **242** in 1998: 127 boys and 115 girls. There were two men teachers posted here, resulting in a pupil/teacher ratio of about 120. At the time of the first site visit, average daily attendance for the previous week stood at 83% for both boys and girls; two months later, girls' attendance had risen to 92% and boys' had risen to 87%. The school has only two rooms and no latrine. One handpump for water, five chairs, four tables, and two chalkboards complete the physical description.

Maharajganj Central School: As the block central school, Maharajganj is the most urban of the schools in the sample, situated in the block headquarters (a small town) and therefore quite accessible by public transport. It has the highest enrollment of the sample schools. In the fall of 1998, there were **586** pupils enrolled: 334 boys and 252 girls. At that time, there were six teachers (down from nine in 1997) posted to serve the nearly 600 pupils. This resulted in a pupil/teacher ratio close to 100. Average daily attendance for one week in October stood at 86% for boys and 88% for girls. The school is relatively well equipped with six rooms where classes can meet, latrines, six chairs and tables, and five blackboards. There is also a central courtyard with large trees where classes often meet when the weather is good.

Patterns of Enrollment and Class V Completion

Using surveys of headteachers and the School Information Form (Annex I) for the 1998-99 data allows the calculation of a cohort completion rate for five of the sample schools (Kusri Sagar is missing data). These cohort completion rates for boys and girls who began school in the fall of 1994 are illustrated in Table 2 below. The average completion rate for boys in the five schools is 51.4%, and the average completion rate for girls in the same cohort is 71%. The range of rates for boys is from 12% to 76%, and for girls the rates vary from 17% to 106%. The reader will note that in only one of the schools, Halor, is the pattern of completions that which one would intuitively expect from knowledge of local conditions. For the other four schools, the completion rates for girls are larger than those of boys and, in some cases, substantially larger.

Table 2. Completion Rates for Cohort Entering School in 1994.

School	Boys	Girls	Gender Ratio
Chandapur	55%	79%	1.44
Deparmau	12	17	1.42
Halor	76	56	.74
Hardoi	64	106	1.66
Maharajganj	50	97	1.94
average	52%	71%	1.44

Class Five Enrollments for Girls

Using official enrollment data (see summary page for each school in Annex 3) an analysis of girls' enrollment in Class V over the past three years can be undertaken. The number of girls in Class V for each of the sample schools and the corresponding gender ratio for Class V is summarized in Table 3 below. Neither enrollments nor gender ratios appear to show any consistent trends, due to wide variations in numbers over the years of interest. A detailed analysis of the local conditions in each school and the different enrollment incentive schemes mounted by the government might help to explain some of the differences.

Table 3. Class V Enrollments and Gender Ratios.

	Class V Enrollments of Girls			Class V Gender Ratios		
School	**96-97**	**97-98**	**98-99**	**96-97**	**97-98**	**98-99**
Chandapur	13	21	15	42%	60%	45%
Deparmau	1	1	5	20	20	167
Halor	20	10	15	62	34	66
Hardoi	23	12	19	87	38	60
Kusrisagar	--	18	10	--	113	53
Maharajganj	33	27	37	103	51	66
average	**18**	**15**	**17**	**63%**	**53%**	**65%**

Specific Actions, Behaviors, Methods and Practices in Classrooms

As stipulated in the contract, this document also describes the "specific methods, behaviors, actions and practices" (Attachment 2, p. 2) being implemented by trained teachers in the sample schools in Maharajganj. Analyses show how the project teacher training module "trains teachers in the use of these practices" (Attachment 2, p. 2). Most importantly, however, this section demonstrates how these practices are being translated into school-level actions, behaviors, methods, and practices that have the potential to foster the increased school-going of girls.

Research and Evaluation Methods

A total of **73** observations of teachers had been conducted by December, 1998, in six sample schools in Maharajganj. These six schools, a 10% sample of the 65 total schools, were selected because they represent a range in size, proximity to a good road, and ratio of pupils to teachers. They also have varying proportions of female teachers, although few schools in the block have many.

The Field Director and research staff were trained in August 1997 to ensure comparable observations across the teachers and schools. A total of five research staff conducted observations beginning in September 1998; this data gathering effort is still in process. The field researchers include Ms. Arti Srivastava, Ms. Kanthi Shukla, Ms. Sangeeta Anand, Mr. Rajshekar Singh, and Ms. Ram Dulari Yadav.

During site visits to the schools, the field researchers undertook two primary activities. First, they completed a School Information Form with the assistance of the head teacher/principal of the school. Second, they conducted a series of 30-minute class observations of the teachers present at school on the day of the site visit (Annex 2). In these observations to determine preliminary program effects, the field researchers had the goal of observing both the teacher and the class. This strategy was subsequently modified to focus on one lower primary class and one upper primary class, given that one teacher covers several classes at each school. The analysis reported here is based on the 73 observations completed by the end of 1998. The distribution of the observations across the schools is presented below in Table 4.

Table 4. Distribution of Observations in Sample Schools, By Level.

School	# lower primary	# upper primary	# mixed upper and lower	total
Chandapur	1	3	1	**5**
Deparmau	6	3	3	**12**
Halor	7	6	2	**15**
Hardoi	10	7	-	**17**
Kusrisagar	7	5	2	**14**
Maharajganj	6	4	-	**10**
total	**37**	**28**	**8**	**73**

Specific Teaching Practices to Foster Girls' Inclusion in Classrooms

The findings reported in this section must be interpreted in the context of learning environments for children in the state of Uttar Pradesh. We draw on the *PROBE* report to depict these conditions which have been confirmed as consistent with conditions in the pilot block as reported in *Baseline Study, Part III,* and in *Developing a Teacher Training Module for Increasing Girls' Participation in Primary Schools* (Sahni, 1998).

Context

Teacher Shortages. Teaching and learning are severely hindered when there are teacher shortages. This problem, according to the *PROBE* report, "culminates in single-teacher schools" (p. 44). While the government has tried to abolish such shortages, the PROBE team found that "one-third of the primary schools surveyed...were *de facto* single-teacher schools" (p. 45). Single-teacher schools may suffer the most, but schools with even two teachers are still heavily challenged to provide effective instruction.

This has been confirmed as a persistent problem in the pilot block where the pupil/teacher ratios range from 60 in the smallest school to a dramatic high of 311 in the one single-teacher school in the sample. Excluding that school from the analysis results in an average pupil/teacher ratio for the remaining sample schools of 102. All schools in the pilot block were staffed at about half the allocation stipulated by government algorithms (1 teacher for every 40 pupils) for the 1997-98 school year. During the first several months of the 1998-99 year, however, staffing was cut and several teachers were posted to schools outside the block. This was most apparent in the single-teacher school—Deparmau—which had five teachers posted at the beginning of the school year only to have four of them re-assigned three months later. Such understaffing means that teachers must routinely cover more than one class, a circumstance that is compounded by high levels of teacher absenteeism.

Teachers are also called upon to perform non-educational tasks, given that they are often the sole civil servant in a village. Other activities also detract from effective teaching and learning. The *PROBE* report provides substantial evidence of this: the field researchers noted those activities headteachers were engaged in when observed. Fully one-third were absent and only one quarter were engaged in actual teaching. Other activities such as supervision, minding a class, and talking with other teachers consumed the remaining time (p. 47). One half of the other teachers (not headteachers) were engaged in teaching. These teachers were observed to be engaged in such non-instructional activities as minding a class, sitting or standing outside the class, in the headteacher's room, or talking with other teachers (p. 47).

Instructional Practices. Instruction in the typical *PROBE* school consisted of giving pupils written exercises to perform. Field researchers asked Class 1 teachers what their teaching methods had been on the day of the site visit. 59% reported giving written exercises and reading from a textbook; 52% said they had written on the chalkboard; and 22% gave rote learning exercises and told pupils to read aloud in turn. Only 14% reported having one pupil teach others and 7% reported playing games. The researchers conclude by noting that:

> Class-1 children tend to be systematically neglected. This can take the form of keeping them idle, leaving them to their own devices, expecting them to learn from their peers, or lumping them with higher classes. When teachers are unable or unwilling to teach all the children, they typically concentrate their efforts on the older children (p. 48).

This poor instructional environment was confirmed in baseline studies for the project

where little interactive teaching in the pilot block schools was observed during the action research phase of development

The Curriculum. The official curriculum systematically disadvantages girls as evidenced in the *PROBE* report in its analysis of a Class III Hindi textbook used in Uttar Pradesh (*Gyan Bharti*). In this text, there are 49 illustrations of men or boys but only 14 of women or girls. The illustrations of men include "a scientist, a soldier, two doctors, a teacher, kings and poets. By contrast, only 14 women (or girls) are represented. Almost invariably, they are shown in subordinate positions or standard 'female' roles" (p. 51).

These *PROBE* findings are echoed in the analyses of the curriculum conducted by project staff and Master Trainers for other textbooks used in Uttar Pradesh. Examples of girls and women are few and far between; when present, women are shown as passive or non-courageous. (For detailed descriptions of these textbook analyses, see Sahni, 1998).

Implications for Interpreting the Findings

Given this quite dismal context for teaching and learning environments in government schools, we can cautiously assert that ***any teaching practice that is interactive, engages boys and girls about equally, uses diverse examples in lessons, and draws out pupils to be more actively involved in learning represents a substantial improvement.*** The prestigious *PROBE* report, conducted and written by highly respected Indian educators, and project analyses for participatory development and baseline descriptions, together support this conclusion.

The observation data show that the project has had significant preliminary impact on the teaching and learning environments for both boys and girls in the sample schools in the pilot block. Highlights of these results are summarized below:

- The number of examples of girls and women during lessons is high, given the curriculum's reliance on male examples
- Women teachers are twice as likely as men teachers to use examples of girls and women at all
- Women and girls are depicted in traditional roles more frequently than in non-traditional roles by both men and women teachers
- Language constructions used by teachers are inclusive of both boys and girls
- Teachers ask questions of girls more frequently than of boys, although general questioning patterns are inclusive
- Girls are called to the blackboard or the front of the class to recite, lead a song or part of a lesson more frequently than boys
- Girls are seated with equal access to the teacher

As developed through the participatory development and initial pilot testing phases of the project, several specific actions, behaviors, methods, and practices have been incorporated into the teacher training and the handbook activities. These are discussed below with summaries of the findings to date that suggest preliminary effects.

Specific Practice: ***Adapting lessons to include examples of girls and women***

Rationale: As documented in *Developing a Teacher Training Module for Increasing Girls' Participation in Primary Schools* (Sahni, 1998), the existing curriculum rarely uses examples of women and girls and when it does so, they are shown to be in subservient or passive roles. The training module shows teachers how to adapt lessons by giving them specific examples to use as models, which are included in the Gender Handbook. These specific practices will help create an environment supportive of girls.

The observation protocol has the field researchers document the number of times female and male characters and examples are used in the lesson (item 2).

Findings: **Examples of girls and women are quite high** overall but somewhat lower than examples of boys and men (46% examples were of females while 54% were of males). Given that textbooks overwhelmingly use male examples, this represents a substantial modification made by teachers. The observations of women teachers show that **women are twice as likely as men teachers to use examples of girls and women** (68% to 32%).

These findings show clear results from the project training which trains teachers to develop and use examples of girls and women in their teaching. This is especially significant in light of the dull pedagogy typical of many classrooms reported above. It is not altogether surprising that women teachers enrich their teaching with more examples than do men teachers. (Of the 208 examples of girls and women, 141 were presented by women teachers.) This finding has implications for blocks with substantial proportions of men teachers, such as the pilot block.

Specific Practice: ***Modifying the curriculum to provide examples of women and girls in non-traditional roles***

Rationale: A similar logic to that used for item 2 above drove the development of this element of the training module and handbook. In sum, the more often girls are exposed to role models of women and girls doing courageous and/or intellectual work, and depicted in roles outside of the home, the more likely they are to see these roles as possibilities. The links to schooling to develop the skills to do such work are clear.

Item 3 of the observation protocol asked field researchers to note the frequency with which women were depicted in traditional roles and in non-traditional roles.

Findings: **Teachers depict women in traditional roles more frequently than in non-traditional roles**—68% to 32%. In addition, during the 73 observations, **men teachers were not observed to depict a girl or woman in a non-traditional role**. Women teachers were found to depict women in both traditional and non- traditional roles more than three times as often as men teachers did (78% to 22%).

Depicting women and girls in traditional roles remains a persistent issue for textbooks and teachers. However, the observation of teachers using any examples of women or girls in non-traditional roles is a clear departure from typical practice. Furthermore, the finding that women use examples of women (traditional or non-traditional) much more than men teachers also has implications for training in blocks with large proportions of men teachers.

Specific Practice: ***Using gender-neutral and female-specific language in teaching lessons***

Rationale: The training module provides teachers with examples and strategies for reflecting on and modifying the language they use in teaching based on the rationale that such actions represent a more inclusive lexicon. Girls are then more likely to relate more easily to the content of the lesson than when typical, male-dominated language is used.

Field researchers noted the number of times during an observation that teachers used gender-neutral, male-specific, and female-specific language (item 4).

Findings: **The language used by teachers is overwhelmingly gender-neutral**—51% of the usage recorded was inclusive of both boys and girls. Male and female constructions were used about equally (26% and 23%, respectively). Men and women teachers were observed to use gender-neutral language about equally (48% men; 52% women). A similar pattern was observed in both men and women teachers' use of female constructions.

These findings suggest that trained teachers in the sample schools are aware of the exclusionary effect of using predominantly male constructions when teaching and are making substantial efforts to be more inclusive as they instruct. Using language to counteract historic male-dominated language patterns (either gender-neutral or female-specific) was dramatically present in the sample schools: 75% of all instances (592 of 797 total) were inclusive or supportive of girls.

Specific Practice: ***Calling on girls to respond to questions during lessons***

Rationale: As well documented in Attachment 2 to the Contract (pp. 10-12), research demonstrates that questioning practices have been found, at least in US contexts, to foster the inclusion of girls in classroom interactions. The training module and accompanying handbook provide examples of and practice in strategies for teachers to use in calling on girls to respond to questions.

In the observation protocol, field researchers noted the number of times the teacher called on girls and on boys during the lesson (item 5).

Findings: **Teachers ask girls questions slightly more frequently than boys.** Analyses of the observations show that teachers consistently ask questions of both boys and girls, but the proportion of questions asked of girls was slightly higher than questions posed to boys. 51% of questions (301 questions from a total of 592) were asked to girls; 49% to boys (291 questions). More than half of all questions posed to either boys or girls came from women teachers (341 of 592, or 58%). Also of note is the finding that, of all the questions posed by men teachers, slightly more were asked of girls (53%).

These findings are significant for two reasons. First, pedagogy in typical classrooms, as described above, rarely relies on questioning strategies. Thus, the finding that **project-trained teachers use the interactive method of asking pupils questions at the rate of 8 questions per 30 minutes (every four minutes or so)** is a major positive result. Furthermore, teachers demonstrate that they are implementing specific methods to include girls more consistently in their lessons. This, too, is a substantial result of the project.

Specific Practice: ***Calling on girls to recite and to lead poems and lessons***

Rationale: The more frequently girls are drawn upon to serve in these highly visible and important roles during lessons and other classroom activities, the more likely they will be to value their schooling experience. The training module shows teachers how to encourage girls in these roles.

The observation protocol had the field researchers note the frequency with which teachers asked girls and boys to recite, lead a song or part of a lesson, or write on the chalkboard (item 6).

Findings: **Girls are called to the blackboard or the front of the class to recite, lead a song or part of a lesson slightly more frequently than boys—** 54% to 46%. Results from observations on this specific practice show that women teachers were more likely to call on girls to recite and lead a lesson than boys-60% of these actions were initiated by women teachers. Of the

total frequency of this practice-313 observations-187 were initiated by women.

Set against the backdrop of classroom conditions described above, these findings are also quite important. Trained teachers are including girls in lessons by having them take important instructional roles. Boys, too, benefit from this practice. Over four times in each half-hour, teachers called on both boys and girls to come forward and participate actively in the lesson. This specific practice, too, suggests that trained teachers engage in more interactive pedagogy than typically found in rural government schools in UP.

Specific Practice: ***Structuring seating arrangements so that boys and girls have equal access to the teacher and the blackboard***

Rationale: The project staff, consultants, and teacher-researchers involved in the initial participatory development of the training module were quite emphatic that a gender-sensitive environment should not necessarily mean that boys and girls would be seated in mixed fashion. Such practice would violate the cultural norms held by some villagers and is not consistent with their beliefs. The training module focuses on having teachers seat pupils so that girls and boys are arrayed in equal proximity to the teacher.

The observation protocol asked the field researchers to draw the seating arrangement in the observed classroom (item 7).

Findings: **Girls were seated with equal access to the teacher** across all observations with predicted differences between the lower and upper primary grades. In the lower grades (I-III), boys and girls were typically seated in a mixed pattern. In contrast, in the upper grades (IV-V), boys and girls were segregated, with the most typical pattern of boys on one side and girls on the other.

These arrangements reflect community and parental preferences for older girls to be separated from boys. It does suggest, however, that teachers are sensitive to ensuring that girls sit with direct access to instructional activities.

Specific Practice: ***Using girls in leadership roles***

Rationale: Specifically, the training module encourages teachers to use girl pupils from the upper grades to serve as monitors for the lower grades. In many schools in the block, teachers must cover more than one class and often rely on monitors to supervise the work of younger pupils. Using older girls in such leadership roles validates them as instructional aides for the teachers.

Using the School Information Form, which is completed once during a site visit, the field researchers noted the number of times boys and girls were called upon to serve as class monitors (item 3).

Findings: **Boys serve as monitors slightly more frequently than girls**—54% of the monitors noted were boys while 46% were girls. Of the 26 times field researchers found older pupils serving as monitors, 12 were girls from Class IV or V.

This finding, too, must be interpreted in light of typical conditions in classrooms in UP. Both boys and girls serve as monitors which is a frequently needed role in the understaffed schools in the pilot block. The specific method of using older boys and girls as monitors benefits both by providing opportunities to teach younger children and to enact the role of teacher. Such opportunities may serve to encourage girls in their schooling.

School and classroom interactions: ***Assessments of girls' participation in the lesson observed***

Rationale: Field researchers were asked to provide a narrative description of their judgment about the participation of girls in the lessons observed and how interactive the teaching was. The rationale here was to provide narrative data to supplement the numerical data. (item 8)

Findings: **The level of interaction between teachers and pupils is remarkably high, given typical classroom practice.** However, the ways in which girls participated and teachers made the lessons interactive varied somewhat across the 73 observations. The observations suggest that **the more interactive the pedagogy, the more likely girls are to feel included and hence to participate**. The following summaries are extracted from the observation forms[4] and provide supplementary information to describe classroom learning environments. Examples of girls' strong participation and interactive teaching methods are provided as well as more troublesome examples. Several examples are drawn from Class I because the *PROBE* report specifically notes how this class is often the most disadvantaged and neglected. The examples below provide strong evidence that teaching can be engaging and interesting for even the youngest pupils.

[4] These narratives were translated by Mukul Datt Bhat and are presented with minor editing.

Strong participation of girls and good classroom interaction:

Class I: "There was participation of girls in class. Classes started through games, *Bale Bochho Kya Hai Gole*. The teacher made them play and sing songs. The teacher told boys and girls to read out lesson. Contact of children with teacher was good because children were not hesitant. They were not afraid in class. Students were happy in class." **Chandapur**[5]

Class I: "The teacher explained alphabets. She wrote vowels on the blackboard and told them to repeat it. Then, through the medium of song, each and every child read it. The teacher kept an eye on the children and one who was not studying, she told him to study. So in this way, we can stay that the teacher looks after the students." **Hardoi**

Class II: "There was participation of girls in class. According to students, teacher started games and song before the start of class, then gave various examples and made them understand. She asked questions by taking boys and girls by name. She was paying attention to all of them. Relation of teacher and students was very good." **Deparmau**

Class IV: "Teacher himself read poetry. He then made boys and girls read it out and explained the poetry. He asked questions from boys and girls; children answered his questions. Teacher also asked children their expectations. Relation of students and teacher is good." **Kusrisagar**

Class V: "Participation of girls in class was good. There is no hesitation inside them. Teacher taught the lesson and made them understand it. Girls also gave answers to questions. She also explained meaning of hard words. Contact of children with teacher is good." **Deparmau**

Class V: "Participation of girls in class was good. Hesitation in girls is less. Teacher made children stage a play. Children acted enthusiastically and also sung song and poems by both boys and girls. Contact with children by the teacher is good." **Halor**

Hesitant participation by girls and little interaction:

Class III: "Only some girls participated in class. When teacher asked, only some girls gave answers. The teacher solved problems by asking children and told its method. Contact of children with teacher is less; children pay less attention." **Deparmau**

[5] To protect the identity of the teachers, only a school name is provided.

Class III: "There was no participation of girls in class, only the instruction of teacher. Lesson was being taught; students were writing answers in Hindi to questions by the instructions of teacher. Teacher asked questions in between class and told some answers. He was not able to pay attention to all the students. Students at the back were talking to themselves." **Maharajganj Central**

Additional Preliminary Effects for Teachers

The professional development opportunity represented by the project training and subsequent meetings with other teachers is a significant preliminary result of the project. As noted in previously submitted documents—notably, *Developing a Teacher Training Module for Increasing Girls' Participation in Primary Schools* (Sahni, 1998)—teachers have reported an increased sense of professional commitment because of this training. Many of those teachers most intensively involved—the teacher-researchers—have developed into Master Trainers who are committed to the improvement of education for girls throughout the block. These Master Trainers have taken on substantial responsibilities to train and support their peers in making classrooms more supportive of all pupils with a specific focus on girls. They are:

Vimal Awasthi
Krishna Devi
Premlata Devi
Sunita Devi
Pir Gulam
Khalil Mohammed
Shiv Prasad
Ahrawan Baksh Singh
Aniruddh Singh
Badan Singh
Kanchan Singh
Satendra Singh

As one of these Master Trainers reported to the authors during a visit to the field, she would have never considered being away from her husband and family to help conduct training for other teachers if she had not had the professional development opportunity afforded by the project. For those teachers who have attended the training workshops and for whom plans are underway for subsequent supervision and monitoring (see *Plan for the Use of Findings for Decision-making and Refinement of Program*), there will be substantial growth opportunities.

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Annex 1. School Information Form

These data are to be recorded **once** during a site visit

Name of school_____
Date _____
Researcher's name_____

1. Record below the enrollment of boys and girls in all classes in this school (from Attendance Register):

Class	boys	girls	total
I			
II			
III			
IV			
V			

2. Record below one full week's attendance of boys and girls by class (from Attendance Register):

	boys						girls					
Class	M	T	W	Th	F	S	M	T	W	Th	F	S
I												
II												
III												
IV												
V												

3. During the site visit, tick the number of times you observe boys and girls used as monitors.
   boys_____
   girls_____
4. Describe the school facilities.
   number of classrooms_____
   number of teachers_____ male___ female___
   latrines: yes___ no___ separate one for girls: yes___ no___
   condition of facilities (briefly describe):

Annex 2. Classroom Observation Protocol

Record the following information as completely as possible. Each observation must be 30 minutes long. When 30 minutes are over, rest for 10 minutes, then begin another observation. **USE ONE PROTOCOL FORM FOR EACH OBSERVATION.** There must be three observations of 30 minutes each for each class. If two classes are together in one room or in one area (such as under a tree), consider this as one unit.

Name of school_____
Name of teacher_____ Male ___ Female ___
Class(es) taught_____
Date_____
Time of observation: from_____ to_____
Subject(s) taught during observation_____
Trained in Joyful Learning: yes___ no___ If yes, when?_____
Trained in Girls' Education: yes___ no___ If yes, when?_____

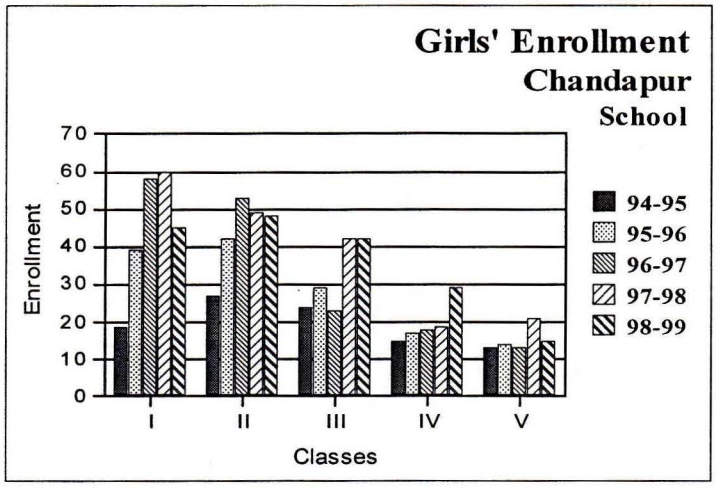
1. Count the number of boys and girls who have the following materials. You may have to ask the children to raise their hands to give you the information. Do this once for each class.

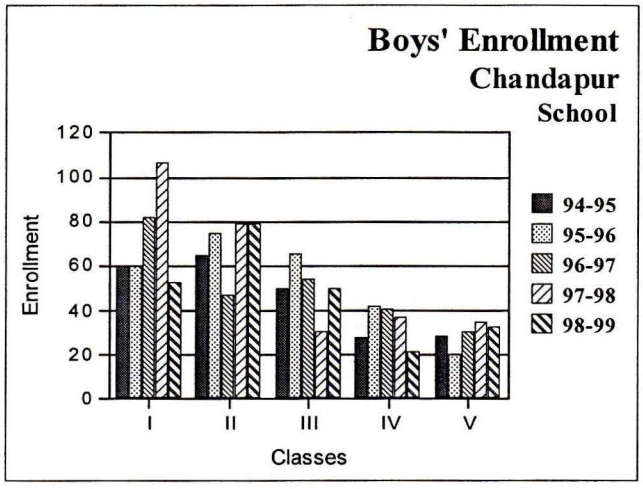
	boys	**girls**
copy slate	___	___
chalk	___	___
pencil	___	___
rubber	___	___
mat	___	___
copy book	___	___

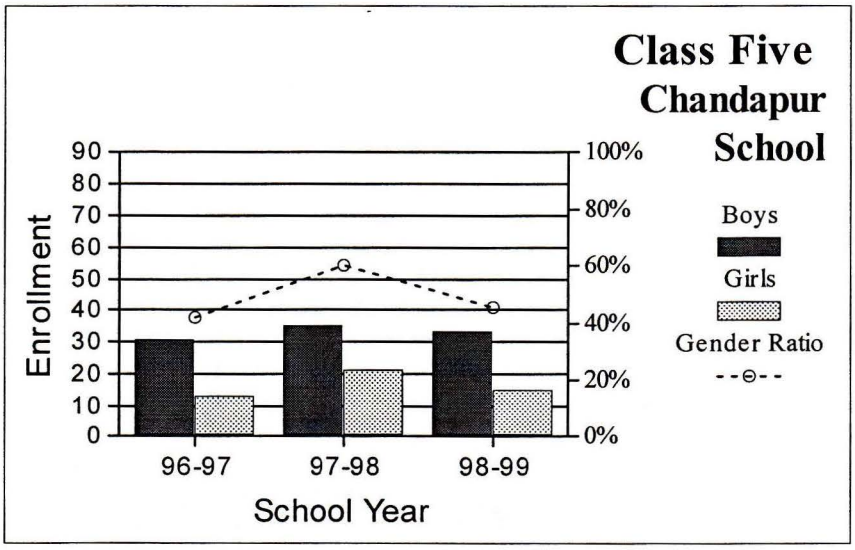
2. Make a hash mark (/) each time a male character and example is used in the lesson and each time a female character and example is used in the lesson:
   male_____
   female_____
3. Make a hash mark (/) each time a woman is depicted in a traditional roles and each time a woman is depicted in a more varied role:
   traditional roles_____
   varied roles_____
4. Make a hash mark (/) each time the teacher uses a male-only, female-only, and gender-neutral word or language during the lesson:
   male-only language_____
   female-only language_____
   gender-neutral language_____
5. Make a hash mark (/) each time the teacher asks a question to a boy and to a girl:
   boys_____
   girls_____
6. Make a hash mark (/) each time a boy and a girl is called to recite, lead a song or part of a lesson, or to write on the chalkboard:
   boys_____
   girls_____
7. Draw a simple chart showing where boys and girls are seated in the class. Use B for boys and G for girls.
8. Write below your assessment of how girls participated in the lesson and how the teacher engaged them in learning the lesson. If there was little interaction between the teacher and **all** pupils, indicate that.

Chandapur School Data

School Name	Boys' Enrollment					Boys	Girls' Enrollment					Girls	All	G-R
Chandapur	B1	B2	B3	B4	B5	Total	G1	G2	G3	G4	G5	Total	Total	Five
94-95	60	65	50	28	29	232	19	27	24	15	13	98	330	45%
95-96	60	75	66	42	20	263	39	42	29	17	14	141	404	70%
96-97	82	47	54	41	31	255	58	53	23	18	13	165	420	42%
97-98	107	79	31	37	35	289	60	49	42	19	21	191	480	60%
98-99	53	79	50	22	33	237	45	48	42	29	15	179	416	45%
Completion Rate for 94 - 95 cohort					55%	255					79%	155	410	

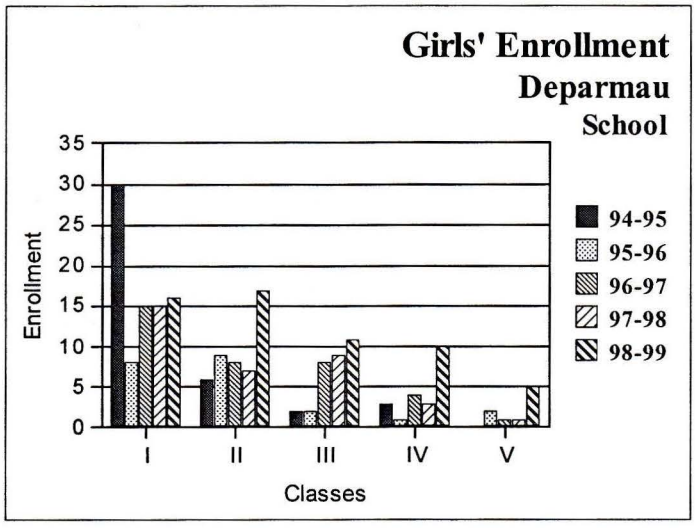


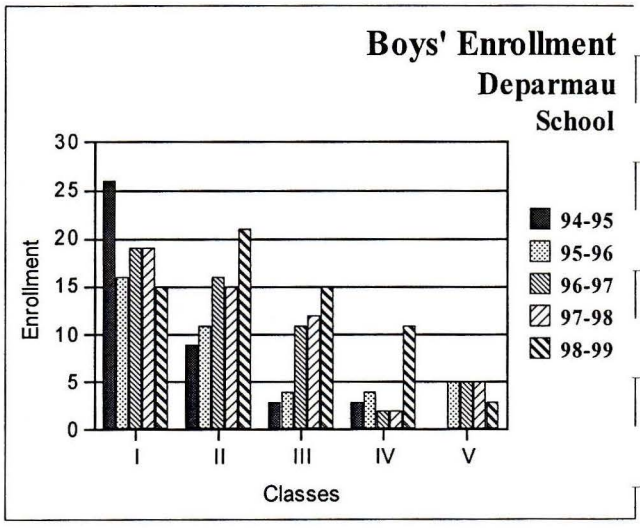


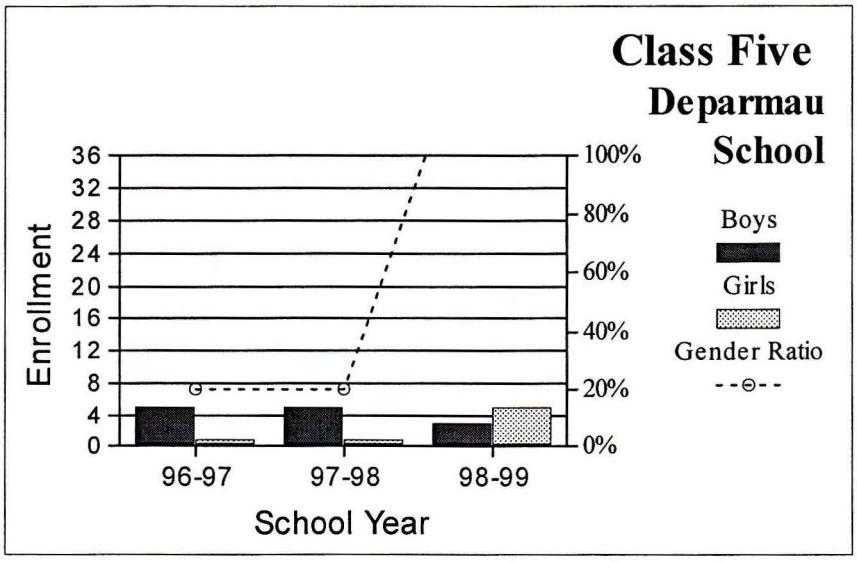


Deparmau School Data

School Name	Boys' Enrollment					Boys	Girls' Enrollment					Girls	All	G-R
Deparmau	B1	B2	B3	B4	B5	Total	G1	G2	G3	G4	G5	Total	Total	Fiv
94-95	26	9	3	3	0	41	30	6	2	3	0	41	82	na
95-96	16	11	4	4	5	40	8	9	2	1	2	22	62	40%
96-97	19	16	11	2	5	53	15	8	8	4	1	36	89	20%
97-98	19	15	12	2	5	53	15	7	9	3	1	35	88	20%
98-99	15	21	15	11	3	65	16	17	11	10	5	59	124	167%
Completion Rate for 94 - 95 cohort					12%	50					17%	39	89	

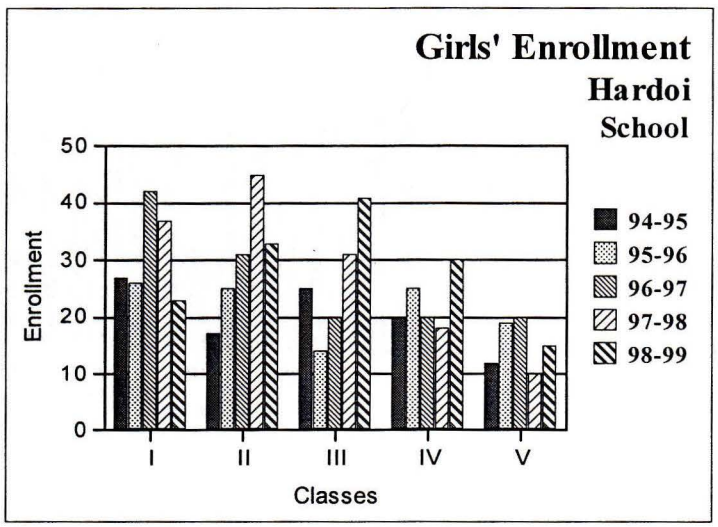


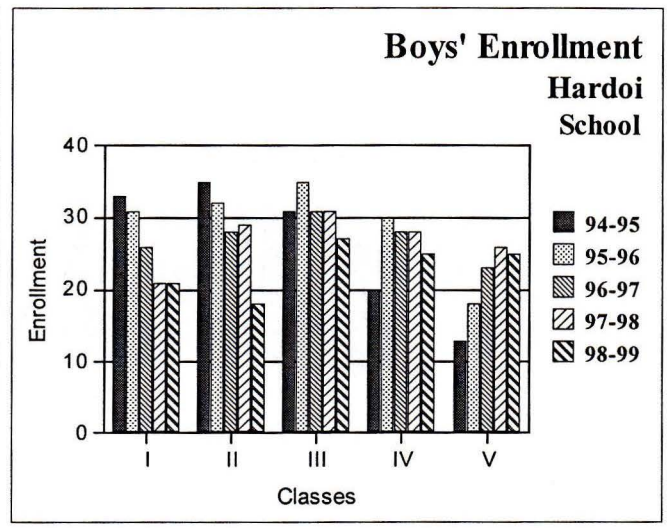


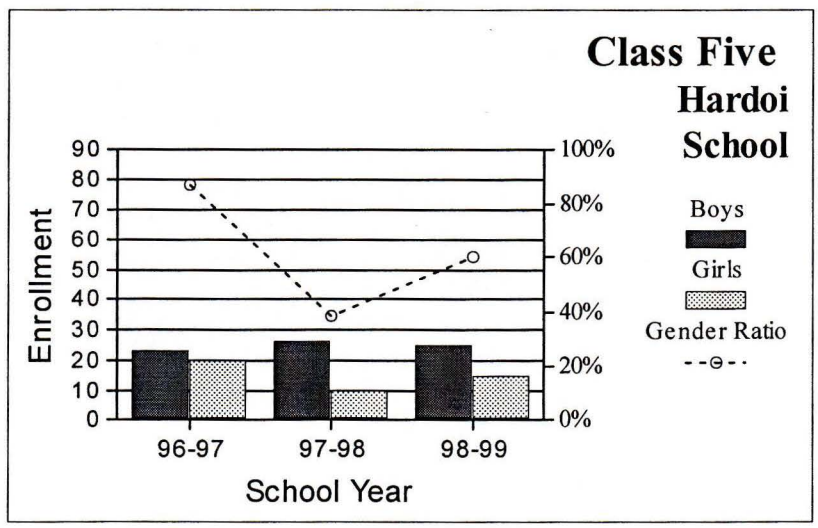


Hardoi School Data

School Name	Boys' Enrollment					Boys	Girls' Enrollment					Girls	All	G-R
Hardoi	B1	B2	B3	B4	B5	Total	G1	G2	G3	G4	G5	Total	Total	Five
94-95	33	35	31	20	13	132	27	17	25	20	12	101	233	92%
95-96	31	32	35	30	18	146	26	25	14	25	19	109	255	106%
96-97	26	28	31	28	23	136	42	31	20	20	20	133	269	87%
97-98	21	29	31	28	26	135	37	45	31	18	10	141	276	38%
98-99	21	18	27	25	25	116	23	33	41	30	15	142	258	60%
Completion Rate for 94 - 95 cohort					76%	133					56%	125	258	

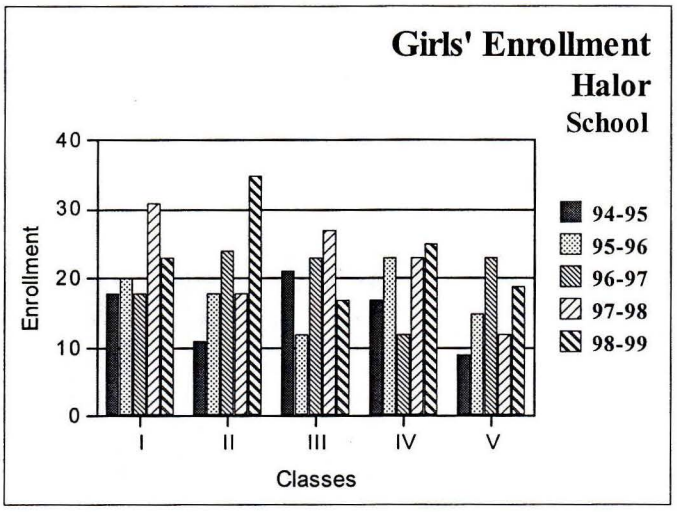


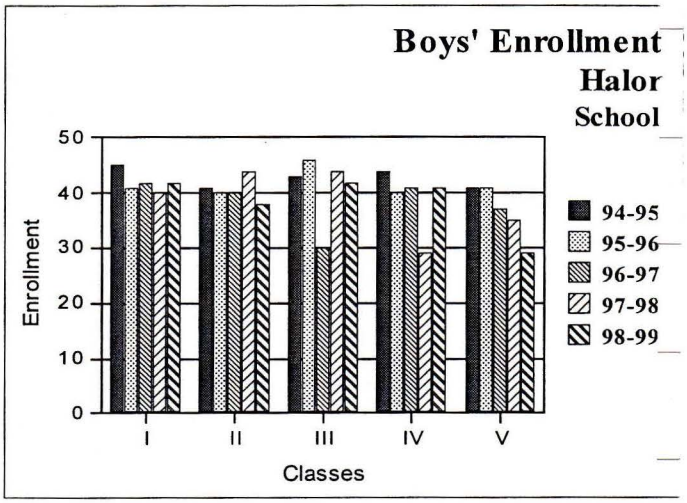


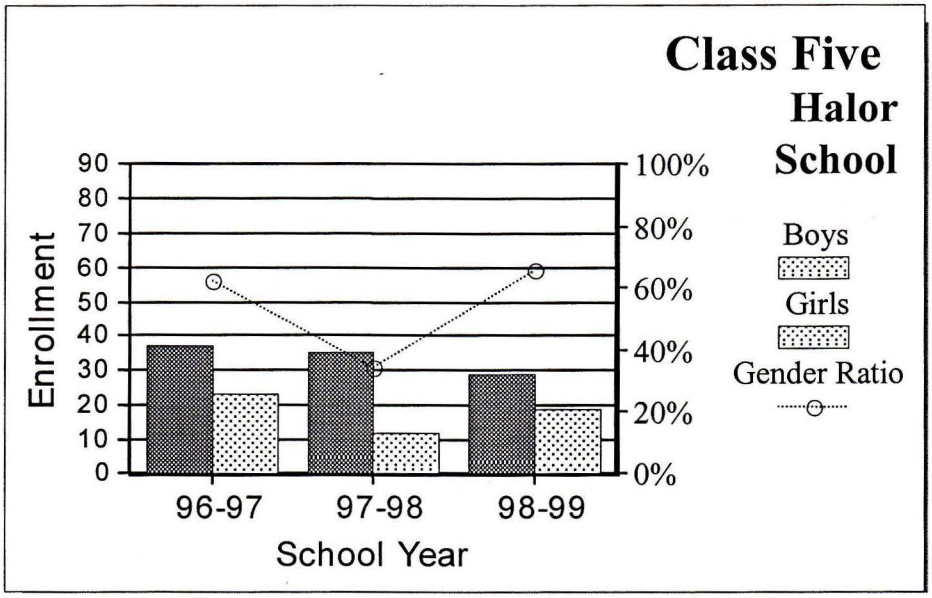


Halor School Data

School Name	Boys' Enrollment					Boys	Girls' Enrollment					Girls	All	G-I
Halor	B1	B2	B3	B4	B5	Total	G1	G2	G3	G4	G5	Total	Total	Five
94-95	45	41	43	44	41	214	18	11	21	17	9	76	290	22
95-96	41	40	46	40	41	208	20	18	12	23	15	88	296	37
96-97	42	40	30	41	37	190	18	24	23	12	23	100	290	62%
97-98	40	44	44	29	35	192	31	18	27	23	12	111	303	34
98-99	42	38	42	41	29	192	23	35	17	25	19	119	311	66
Completion Rate for 94 - 95 cohort					64%	199					106%	99	298	

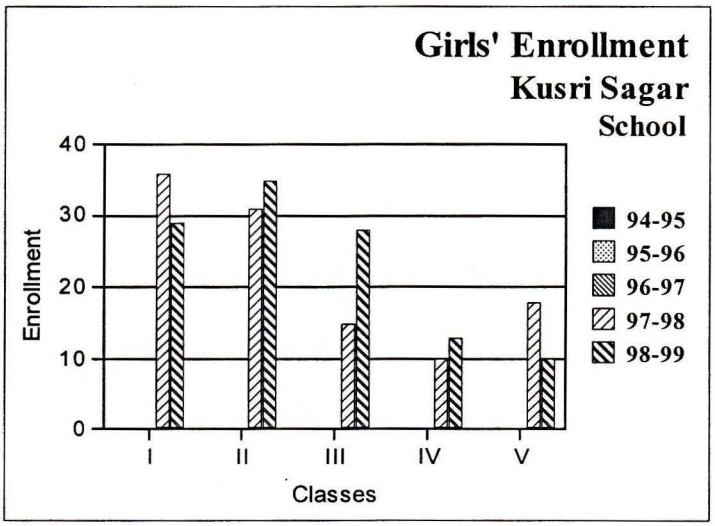


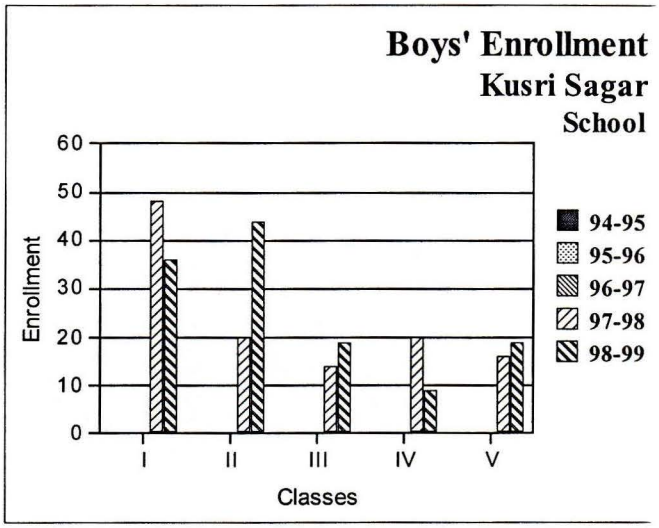


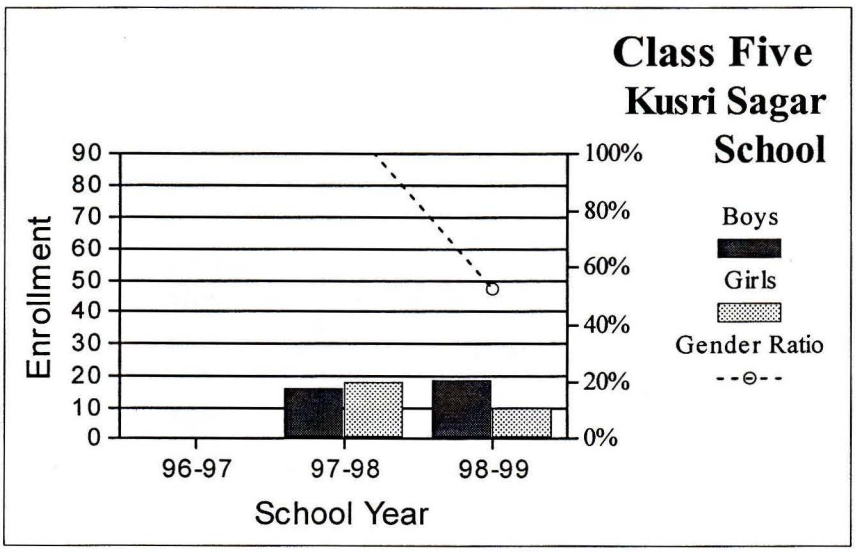


Kusri Sagar School Data

School Name	Boys' Enrollment					Boys	Girls' Enrollment					Girls	All	G-R
Kusri Sagar	B1	B2	B3	B4	B5	Total	G1	G2	G3	G4	G5	Total	Total	Five
94-95	0	0	0	0	0	0	0	0	0	0	0	0	0	na
95-96	0	0	0	0	0	0	0	0	0	0	0	0	0	na
96-97	0	0	0	0	0	0	0	0	0	0	0	0	0	na
97-98	48	20	14	20	16	118	36	31	15	10	18	110	228	113%
98-99	36	44	19	9	19	127	29	35	28	13	10	115	242	53%
Completion Rate for 94 - 95 cohort					na	49					na	45	94	







Maharajganj School Data

School Name	Boys' Enrollment					Boys	Girls' Enrollment					Girls	All	G-F
Maharajganj	B1	B2	B3	B4	B5	Total	G1	G2	G3	G4	G5	Total	Total	Five
94-95	111	69	49	37	36	302	38	26	46	23	16	149	451	44%
95-96	34	69	55	41	46	245	52	57	20	41	22	192	437	48%
96-97	70	71	63	52	32	288	50	52	37	22	33	194	482	103%
97-98	85	106	52	50	53	346	35	74	40	37	27	213	559	51%
98-99	83	86	63	46	56	334	62	53	67	33	37	252	586	66%
Completion Rate for 94 - 95 cohort					50%	303					97%	200	503